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Three new species of *Hemicorynespora* and *Solicorynespora* from southern China

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ABSTRACT — Three new hyphomycetes were collected from decaying twigs of unidentified plants in southern China. *Hemicorynespora obovoidea* sp. nov., *Solicorynespora jinggangshanensis* sp. nov., and *S. lushanensis* sp. nov. are described, illustrated, and compared with closely related taxa.

KEY WORDS — anamorphic fungi, saprobic fungi, taxonomy

Introduction

During ongoing surveys of saprobic microfungi from forests of southern China, several interesting *Corynespora*-like taxa were found on decaying twigs. Among these were three species having the morphological features typical of *Hemicorynespora* M.B. Ellis (Ellis 1972) and *Solicorynespora* R.F. Castañeda & W.B. Kendr. (Castañeda-Ruíz & Kendrick 1990). They differ significantly from previously described species in several morphological features, and therefore are described here as new to science.

Hemicorynespora obovoidea Jian Ma & X.G. Zhang, **sp. nov.** FIG. 1

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Differs from all other *Hemicorynespora* species by its obovoid, asymmetrically 1-septate conidia.

TYPE: China, Guangdong Province: Liuxihe National Forest Park, on decaying twigs of an unidentified broadleaf tree, 10 July 2014, J. Ma (**Holotype**, HJAUP M0109).

ETYMOLOGY: refers to the obovoid conidial shape.

COLONIES on natural substrate effuse, brown to dark brown, hairy. Mycelium partly superficial, partly immersed in the substratum, composed of branched,

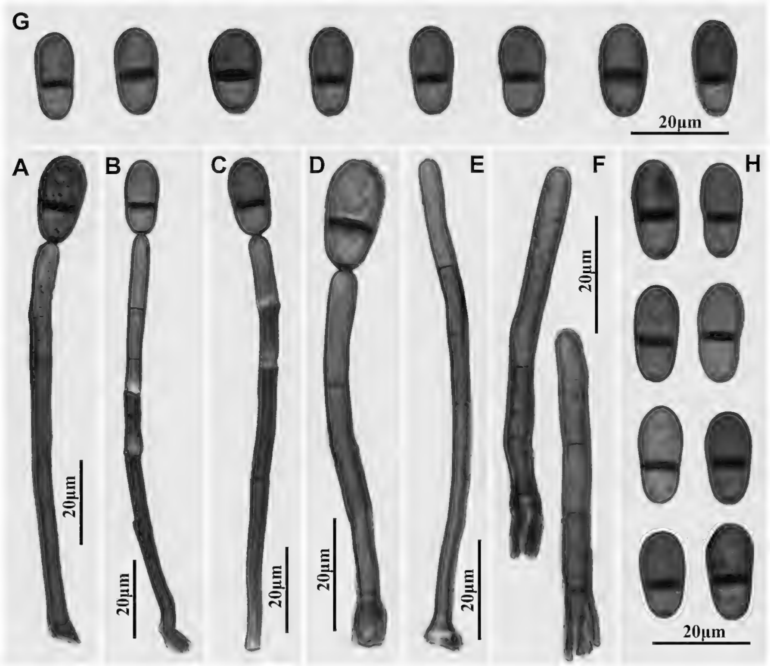

Fig. 1. *Hemicorynespora obovoidea* (holotype, HJAUP M0109): A–D. conidiophores and conidia; E, F. conidiophores; G, H. conidia.

septate, pale brown to brown, smooth hyphae. Conidiophores macronematous, mononematous, single, erect, unbranched, straight or flexuous, cylindrical, brown to dark brown, smooth, septate, 55–110 × 4–5.5 µm. Conidiogenous cells monotretic, integrated, terminal, cylindrical, brown, smooth, 16.5–34.5 × 4.5–5.5 µm, with 0–1 cylindrical percurrent extension. Conidial secession schizolytic. Conidia solitary, acrogenous, dry, obovoid, smooth-walled, brown, asymmetrically 1-septate, 16.5–20.5 × 8–11 µm, 1.5–2.5 µm wide at the truncate base.

Comments—Ellis (1972) established *Hemicorynespora* with two species, *H. deightonii* M.B. Ellis (type species) and *H. mitrata* (Penz. & Sacc.) M.B. Ellis. The genus is characterized by solitary, acrogenous, mitre-shaped, limoniform, obovoid or ellipsoidal, 0–1-septate, smooth conidia seceding schizolytically from integrated, terminal, monotretic, determinate or percurrently elongated conidiogenous cells (Ellis 1972, Seifert et al. 2011). Subsequently, 10 additional species have been reported in *Hemicorynespora* (Ellis 1972, Matsushima 1981, Holubová-Jechová 1987, Subramanian 1995, Mercado et al. 1997, Sivanesan &

Chang 1997, Delgado et al. 2007, Ma et al. 2012a). However, Ma et al. (2012a) excluded *H. obclavata* Subram. (with 2-septate conidia) and *H. multiseptata* Sivan. & H.S. Chang (with 4–5-septate conidia) from the genus; thus *Hemicorynespora* currently contains 10 recognized species. Only *H. clavata* G. Delgado et al. and *H. dimocarpi* Jian Ma & X.G. Zhang have previously been reported from China (Ma et al. 2012a).

Hemicorynespora obovoidea superficially resembles *H. ovata* Subram., which differs by its aseptate conidia (Subramanian 1995).

Solicorynespora jinggangshanensis Jian Ma & X.G. Zhang, **sp. nov.** FIG. 2

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Differs from *Solicorynespora melicopes* by its smaller, predominately 6-septate conidia with the basal cell longer than the second cell and from *S. obclavata* by its wider conidia with a shorter rostrum and the basal cell longer than the second cell.

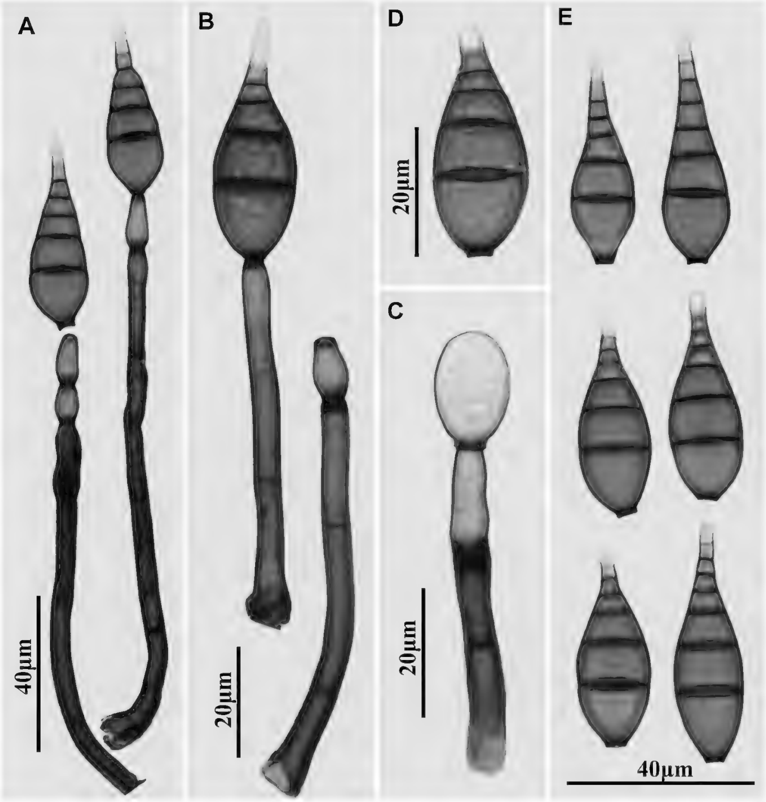

FIG. 2. *Solicorynespora jinggangshanensis* (holotype, HJAUP M0290): A, B. conidiophores and conidia;. C. conidiophore with developing conidium; D, E. conidia.

Type: China, Jiangxi Province: Jinggangshan Mountain, on decaying twigs of an unidentified broadleaf tree, 6 Nov. 2014, J. Ma (**Holotype**, HJAUP M0290).

Etymology: refers to the locality where the type specimen was found.

Colonies on natural substrate effuse, brown to dark brown, hairy. Mycelium partly superficial, partly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth-walled hyphae. Conidiophores macronematous, mononematous, single, erect, straight or flexuous, unbranched, smooth, septate, brown to dark brown, 60–145 × 5–6 µm. Conidiogenous cells monotretic, integrated, terminal, cylindrical or lageniform, brown to pale brown, smooth, 11.5–22.5 × 4.5–6.5 µm, with 0–3 percurrent proliferations. Conidial secession schizolytic. Conidia solitary, dry, acrogenous, obclavate, rostrate, smooth, brown, 5–7-euseptate (mostly 6-septate), 35.5–51 × 13.5–15.5 µm, 3.5–4.5 µm wide at the truncate base, apex extended into a subhyaline to pale brown rostrum, 2.5–3.5 µm wide.

Comments—Castañeda-Ruíz & Kendrick (1990), who re-examined the genus *Corynespora* Güssow using conidial septation as the circumscribing character, erected the segregate genus *Solicorynespora* to accommodate those species previously described in *Corynespora* but with solitary, euseptate phragmoconidia (McKenzie 2010, Ma et al. 2012b, Hernández-Restrepo et al. 2014). Thus far, 22 species have been described in or transferred to the genus (Hernández-Restrepo et al. 2014, Ma et al. 2014).

Of the known species, *Solicorynespora jinggangshanensis* is most similar to *S. melicopes* Jian Ma & X.G. Zhang and *S. obclavata* (Dyko & B. Sutton) R.F. Castañeda & W.B. Kendr. in conidial shape, but *S. melicopes* differs by its larger, predominately 5-septate, occasionally distoseptate conidia (77–94 × 19.5–27 µm); with the longest cell second from the base (Ma et al. 2012b); and *S. obclavata* differs by its narrower conidia (9.5–11 µm wide) with a longer rostrum and the longest cell second from the base (Castañeda-Ruíz & Kendrick 1990).

Solicorynespora lushanensis Jian Ma & X.G. Zhang, **sp. nov.** Fig. 3

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Differs from *Solicorynespora linderae* by its smooth, smaller conidia with more septa.

Type: China, Jiangxi Province: Lushan Mountain, on decaying twigs of unidentified broadleaf trees, 8 Nov. 2014, J. Ma (**Holotype**, HJAUP M0199).

Etymology: refers to the locality where the type specimen was found.

Colonies on natural substrate effuse, brown, hairy. Mycelium partly superficial, partly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth-walled hyphae. Conidiophores macronematous,

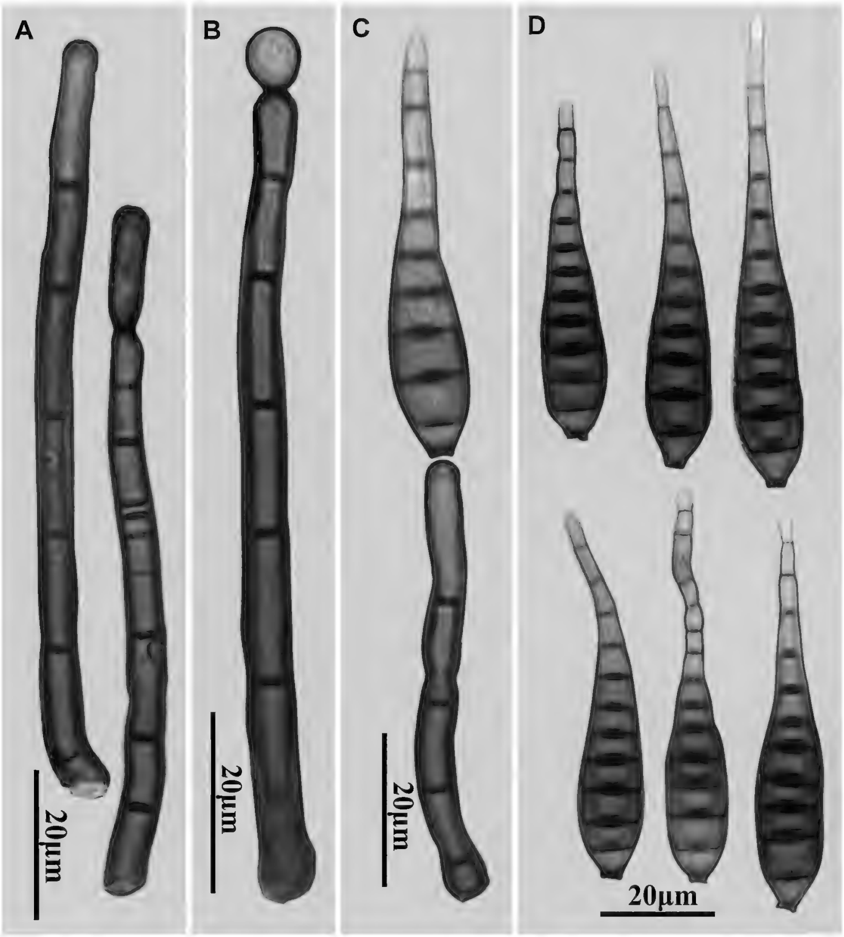

Fig. 3. *Solicorynespora lushanensis* (holotype, HJAUP M0199):
A. conidiophores; B, C. conidiophores and conidia; D. conidia.

mononematous, solitary or in groups, erect, straight or flexuous, unbranched, smooth, brown, 55–115 × 5–6 μm. Conidiogenous cells monotretic, integrated, terminal, cylindrical, brown, smooth, 9.5–20.5 × 4–5 μm, sometimes with 1 percurrent extension. Conidial secession schizolytic. Conidia solitary, dry, acrogenous, obclavate, tapering towards the apex, smooth, brown, paler towards the apex, 9–13-euseptate, 56–78 × 10–12 μm, tapering to 2–3 μm near the apex, 2.5–3.5 μm wide at the truncate base.

Additional specimen examined: CHINA, Jiangxi Province: Lushan Mountain, on decaying twigs of unidentified broadleaf trees, 8 Nov. 2014, J. Ma (HJAUP M0190).

Comments—*Solicorynespora lushanensis* is similar in conidial shape to *S. linderae* Jian Ma & X.G. Zhang, which differs by its larger, 7–9 septate conidia (100–130 × 12.5–15.5 µm) with a verrucose basal cell and a pale brown, aseptate rostrum (Ma et al. 2012b).

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